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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/081,464	02/22/2002	Paul N. Dunlap	L00-079A	1062

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THE GATES CORPORATION  
IP LAW DEPT. 10-A3  
1551 WEWATTA STREET  
DENVER, CO 80202

EXAMINER

JACKSON, MONIQUE R

ART UNIT	PAPER NUMBER
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1773

DATE MAILED: 06/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/081,464

Applicant(s)

DUNLAP, PAUL N.

Examiner

Monique R Jackson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 18 April 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 17-29 and 31-41 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 17-29 and 31-41 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 4/05.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 4/18/05 has been entered.

### ***Response to Amendment***

2. The Examiner would like to point out to the Applicant that under current amendment practice, the text of cancelled claims should not be included in the complete listing of the claims.
3. Given the current amendments to Claims 29 and 31-41, these claims have been rejoined. Claims 17-29 and 31-41 are pending in the application.
4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

### ***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 17-29 and 31-41 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The term "rigid metal member" in claim 17 is a relative term which renders the claim indefinite. The term "rigid" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention considering it is unclear how

“rigid” the metal member need to be in order to be considered a “rigid metal member” according to the invention. With regards to the limitation “said rubber member resides in at least one of a neutral state and a state of compression at a temperature in the range of from about -20°C to about 120°C”, the Examiner notes that this limitation further renders the claims indefinite. First, what is considered “a **neutral** state”? And is this neutral state or state of compression at the time of bonding, before bonding or after bonding? Isn’t the final bonded article including the rubber member in a “neutral state” considering no additional external forces are being applied? Claim 26 further states that “a neutral state and a state of compression is not the result of a post-assembly metal-forming step” however this limitation just excludes steps that would result in forming of the metal but does not exclude any forces that may be applied to the final product and hence provides no further clarification of this limitation.

***Claim Rejections - 35 USC § 102***

7. Claims 17-19, 21, 23-29, 31-34, and 36-37 are rejected under 35 U.S.C. 102(b) as being anticipated by Hosking (USPN 2,409,759.) Hosking teaches direct bonding of rubber to metal wherein the rubber may be preformed or premolded, and vulcanized either partially or completely, prior to its assembly with the metal piece to which it is to be secured, and thereafter bonding directly to said metal piece without the use of tie gums, cements or like adhesives (Abstract; Col. 2, lines 51-54; Col. 3, lines 1-10.) Hosking teaches that the rubber substance is formed from a rubber composition comprising a crude rubber substance such as natural rubber or butadiene polymers like chloroprene or neoprene or the like, a curative such as sulfur, an accelerator (*also a curative*), a softener, and a zinc oxide which in conjunction with the accelerator appears to be essential for the superior bonding properties of the composition (Col. 5,

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lines 43-73; Col. 6, lines 6-17 and Col. 6, line 4 – Col. 7, line 35.) Hosking teaches that the rubber composition is compounded and then preformed or premolded in a shape having a surface conforming substantially to those portions of the metal piece to which it is to be secured, at the same time the mass of rubber is vulcanized either partially or completely (Col. 3, lines 45-54.) The premolded rubber is then assembled with the metal piece in direct contact and then subjected to press molding utilizing sufficient pressure and sufficient heat to cause bonding of the rubber to the metal surface wherein when the rubber is only partially vulcanized, the heat thus applied is also utilized to complete vulcanization of the rubber (Col. 3, lines 54-64.) Hosking further teaches that the rubber may be bonded to a metal sheet (*“rigid” metal member*) as shown in Figure 4 and also notes that a plurality of metal pieces may be bonded to the same mass of rubber wherein the rubber forms a link between the various metal pieces (Col. 9, lines 40-51; Col. 10, lines 38-49.) With respect to the limitation “in the form of a torsional vibration damper” as recited in instant claim 25 and the articles recited in instant claim 34, the Examiner takes the position that these limitations are intended use limitations and do not provide any additional structural differences between the instantly claimed invention and the invention taught by Hosking. With respect to the instantly claimed product-by-process limitations, such as the use of two curatives having different activation temperatures, or the level of partially curing, or the limitation with regards to “a neutral state and a state of compression”, the Examiner takes the position that the invention taught by Hosking anticipates the instantly claimed final product wherein these limitations do not appear to result in a materially or structurally different product than the invention taught by Hosking.

***Claim Rejections - 35 USC § 103***

8. Claims 20, 22, 35 and 38-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hosking in view of Drake et al. The teachings of Hosking are discussed above. Though Hosking teaches that the elastomer or rubber is a curable or vulcanizable rubber substance such as natural rubber or butadiene polymers like chloroprene or neoprene or the like, Hosking does not specifically teach the ethylene elastomers as instantly claimed however the instantly claimed ethylene elastomers such as EPDM are known functionally equivalent elastomers to those taught by Hosking such as chloroprene and butadiene rubbers, as further taught by Drake et al, and would have been obvious to one having ordinary skill in the art at the time of the invention. Further, though Hosking teaches the use of an additive that provides improved adhesion to the metal and further teaches that conventional additives may be included in the rubber composition, Hosking does not specifically teach the incorporation of a metal salt of an unsaturated carboxylic acid or the other adjuvants instantly claimed, however, Drake et al teach that a metal salt of an unsaturated carboxylic acid as instantly claimed when added to an elastomer composition provides improved metal adhesion. Hence, one having ordinary skill in the art at the time of the invention would have been motivated to add a metal salt of an unsaturated carboxylic acid as taught by Drake et al to the elastomer composition taught by Hosking to further improve adhesion between the rubber and the metal. With respect to Claims 38-41, though Hosking teach that the metal members and resulting rubber/metal composite may be in various shapes or forms, Hosking does not teach that the rubber/metal laminate has an annular shape however it would have been obvious to one skilled in the art at the time of the invention to determine the desired shape of the laminate taught by Hosking based on the desired end use of the laminate.

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***Response to Arguments***

9. Applicant's arguments with respect to claims 17-29 and 31-41 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Monique R Jackson whose telephone number is 571-272-1508.

The examiner can normally be reached on Mondays-Thursdays, 8:00AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on 571-272-1284. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Monique R. Jackson  
Primary Examiner  
Technology Center 1700  
June 22, 2005